

REMARKS

Claim 23 and 32 have been amended. Claims 1 to 22; 24 to 27; 29; and 30 have been previously canceled.

Claims 23; 28; and 31 to 38 remain in the application. Of these, claims 23 and 32 are independent method claims. Claims 28; 31; 35; and 36 are dependent upon independent claim 23. Claims 33; 34; 37; and 38 are dependent upon independent claim 32. Claims 28; 31; 35; and 36, and claims 33; 34; 37; and 38 contain parallel subject matter.

As amended, both independent claims 23 and 32 define a method comprising identifying an aorta having an aneurysm and a neck region proximal to the aneurysm and adjacent a renal artery. As amended, both independent claims 23 and 32 define providing a first prosthesis comprising a first trunk including a fabric prosthetic material and a scaffold comprising spaced apart, mutually unattached individual main stent rings that support the prosthetic material to define a lumen within the first trunk. As further defined in both independent claims, the spaced apart, mutually unattached individual main stent rings allow for longitudinal compliance while maintaining radial support of the lumen. As defined in both independent claims, the first trunk is defined as being sized and configured for placement in the neck region to provide reinforcement to the neck region. As defined in both independent claims, the first trunk includes a proximal region (deployed closest to the head), and a distal region.

Claims 23 and 32 differ in that, in claim 23, the fabric prosthetic material of the proximal region and the distal region is defined as being dense to reinforce the proximal region and the distal region – whereas in claim 32, the scaffold of the proximal region and the distal region is defined as being dense to reinforce the proximal region and the distal region.

Other than the foregoing difference, independent claims 23 and 32 are the same. Both define, as amended, define providing a second prosthesis comprising a second trunk including a fabric prosthetic material and a scaffold comprising spaced apart, mutually unattached individual main stent rings that support the prosthetic material to define a lumen within the second trunk. As further defined in the amended claims, the spaced apart, mutually unattached individual main stent rings allowing for longitudinal compliance while maintaining radial support of the lumen. As further defined in both independent claims 23 and 32, the second trunk is defined as being sized and

configured for placement in the aneurysm to bridge the aneurysm. As defined in both independent claims, the second trunk includes a proximal region and a distal region.

Both independent claims 23 and 32 define providing a plurality of tissue-piercing fasteners, and providing an intraluminal fastener attachment assembly that can be manipulated to implant at least one of the plurality of tissue-piercing fasteners into tissue in the neck region. Both independent claims 23 and 32 define deploying the first prosthesis in the neck region with the proximal region placed adjacent a renal artery and the distal region placed adjacent the aneurysm, and deploying the second prosthesis in the aneurysm. Both independent claims 23 and 32 define telescopically fitting the distal region of the first trunk and the proximal region of the second trunk to form a composite prosthesis, the distal region of the first trunk resisting migration of the second trunk. Both independent claims define manipulating the intraluminal fastener attachment assembly to implant at least one of the plurality of tissue-piercing fasteners into tissue in the neck region through the proximal region of at least one of the first trunk and the second trunk to anchor the composite prosthesis, the tissue-piercing fastener being retained in the proximal region of the at least one of the first trunk and the second trunk. And, both independent claims define manipulating the intraluminal fastener attachment assembly to implant another of the at least one of a plurality of tissue-piercing fasteners into tissue in the neck region through the telescopically fitted distal region of the first trunk and the proximal region of the second trunk to anchor the composite prosthesis, the tissue-piercing fastener being retained in the telescopically fitted distal region of the first trunk and the proximal region of the second trunk.

Support for the scaffold comprising spaced apart, mutually unattached individual main stent rings that allowing for longitudinal compliance while maintaining radial support of the lumen can be found, e.g., on page 7, lines 12 to 18, as shown in Figs. 5B (for the first trunk), which Figs. 6A, and 6C also identically show (for the second trunk).

Claim 23 stands rejected under 35 U.S.C. 103(a) based upon Parodi et al (WO 00/16701) in view of Taheri et al. (US 5,591,195), Pinchuk (US 5,855,598), and Layne et al. (US 6,398,803).

Claim 32 stands rejected under 35 U.S.C. 103(a) based upon Parodi et al (WO 00/16701) in view of Taheri et al. (US 5,591,195), and Pinchuk (US 5,855,598).

Regarding claim 23, the Examiner acknowledges that the combination of Parodi, Taheri, and Pinchuk does not disclose the graft material having a greater density at the ends than the

intermediate region. The Examiner draws attention to Layne, “which teaches a graft may have more dense ends (because the intermediate region has openings 44) to increase the flexibility of the prosthesis in the intermediate region.” However, Layne does not teach or suggest a longitudinally compliant structure, as defined in amended claim 23. To the contrary, Layne teaches the necessity for longitudinal support; e.g., see Layne, column 4, lines 7 to 16: “However, circumferentially covering the individual ring stents 30 without any longitudinal support would result in a structure with little longitudinal strength and stability that would be prone to “telescoping”. Thus, the longitudinal sections 48 that connect the circumferential sections of ePTFE 46 are important, because the longitudinal sections 48 are completely laminated to the underlying graft 20 and act as “anti-compression” devices by resisting the shortening of the device 10 (the double thickness of ePTFE resists telescoping of the longitudinal sections 48).

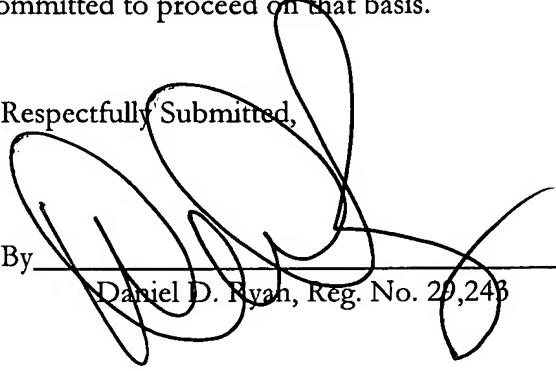
Regarding claim 32, the Examiner states the Taheri “shows the scaffold structure is less dense (fewer struts per area) in the intermediate portion of the prosthesis.” However, Taheri also does not teach or suggest a longitudinally compliant structure, as defined in amended claim 32. To the contrary, Taheri teaches the presence of connecting bars that prevent longitudinal compliance; e.g., see Taheri, column 8, lines 23 to 33: “As shown further in FIG. 1 distal 12 and proximal 11 nitinol springs are connected by connecting bars 13. The material 10 provides complete coverage of connecting bars 13 as well, thereby, again, preventing direct contact between the nitinol and the bodily fluids or tissue. Connecting bars 13 are preferably crimped fit with steel or nitinol hypodermic tubing or laser welded to each of the inner portions 14 of proximal 11 and distal 12 nitinol springs to inhibit the twisting or bunching of graft material 10. For example, without the connecting bars 13, and the associated communication between proximal 11 and distal 12 nitinol springs, the middle area of graft 15 may twist or bunch and collapse, thereby shrinking or eliminating the passage for blood flow. Furthermore, the connecting bars 13 provide extra security during the deployment and positioning of graft 15.”

Neither Parodi nor Taheri nor Pinchuk, or Layne, teaches or suggests a method including providing a composite prosthesis formed between first and second longitudinally compliant prostheses, each with a scaffold comprising spaced apart, mutually unattached individual main stent rings, in combination with the other elements defined in the claims. Accordingly, Applicants request the withdrawal of the rejections under 35 U.S.C. 103(a).

For these reasons, applicant believes that Claims 23; 28; and 31 to 38 are in condition for allowance. If the Examiner believes that questions or matters of clarification remain, applicant believes that such matters can be handled expeditiously by an interview by telephone to advance prosecution of this case, and the applicant is committed to proceed on that basis.

Respectfully Submitted,

By


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